

IN THE CLAIMS

Please amend the claims as follows.

1. (Currently Amended) An adaptable power management system for dynamic current and power management in an imaging system, said power management system comprising:

- a plurality of measurement units for measuring current in the imaging system, each of the plurality of measurement units associated with one of a plurality of components of the imaging system to measure current in the component;
- a main system power for providing power to the imaging system for core imaging system functions;
- a battery charger for recharging a battery used for imaging; and
- a power controller for dynamically allocating power among the main imaging system power and the battery charger based on current measurements from the plurality of measurement units and imaging system configuration information, wherein dynamic allocation and re-allocation occurs automatically based on the current measurements from the plurality of measurement units and imaging system configuration information, and wherein the imaging system configuration information includes a selected imaging mode of operation, a number of imaging system components in use, imaging system component current consumption, and an available input current.

2. (Previously Presented) The power management system of claim 1, wherein the measurement unit measures at least one of current and voltage at a plurality of points in the imaging system.

3. (Previously Presented) The power management system of claim 1, wherein the power controller controls battery charging current after main system power has been allocated.

4. (Previously Presented) The power management system of claim 1, further comprising at least one component providing additional function in the imaging system.

5. (Previously Presented) The power management system of claim 4, wherein the power controller allocates power among the at least one component.

6. (Previously Presented) The power management system of claim 1, wherein the power controller dynamically allocates power within a power limit.

7. (Currently Amended) A method for dynamic power management in an imaging system, said method comprising:

measuring current input in an imaging system;

measuring current usage at a plurality of components in the imaging system; and

dynamically allocating power in the imaging system based on [[a]] an imaging system configuration, the current usage and the current input in the imaging system, wherein dynamic allocation occurs automatically based on the system configuration, the current usage and the current input in the imaging system, and wherein the imaging system configuration information includes a selected imaging mode of operation, a number of imaging system components in use, the imaging system component current consumption, and the available input current.

8. (Original) The method of claim 7, wherein the measuring step further comprises measuring at least one of voltage and current at a plurality of locations in the imaging system.

9. (Original) The method of claim 7, wherein the allocating step further comprises dynamically allocating power based on system usage.

10. (Original) The method of claim 7, further comprising re-allocating power in the imaging system based on a change in configuration.

11. (Original) The method of claim 7, further comprising re-allocating power in the imaging system based on current consumption exceeding a predefined limit.

12. (Original) The method of claim 7, further comprising allocating available current to a battery charger.

13. (Original) The method of claim 7, further comprising maintaining at least a minimum level of power for basic imaging system functions.

14. (Original) The method of claim 7, further comprising controlling an amount of current drawn by components in the imaging system.

15. (Currently Amended) A power management system for dynamic current and power management in an imaging system, said system comprising:

a power input providing power to an imaging system;

at least one measurement unit for measuring current in the imaging system; and

a power management controller dynamically allocating available power among components in the imaging system based on a system configuration, wherein the system configuration includes ~~at least one of~~ a selected imaging mode of operation, a number of imaging system components in use, imaging system component current consumption, available input current and a cord current capacity limit, wherein the dynamic allocation and re-allocation occurs automatically based on the current measurements from the at least one measurement unit and the imaging system configuration information.

16. (Previously Presented) The power management system of claim 15, wherein the power management controller allows a battery for the imaging system to

charge at a maximum rate based on current consumption by the components in the imaging system.

17. (Previously Presented) The power management system of claim 15, wherein the at least one measurement unit measures a voltage and a current for the power provided to the imaging system.

18. (Previously Presented) The power management system of claim 15, wherein the power management controller controls current drawn by the components in the imaging system.

19. (Previously Presented) The power management system of claim 15, further comprising a limit sensor for detecting when current consumption exceeds a certain limit.

20. (Previously Presented) The power management system of claim 15, further comprising at least one switching unit controlled by the power management controller, wherein the at least one switching unit controls an amount of power routed to at least one component in the imaging system.

21. (Previously Presented) The power management system of claim 1, wherein the imaging system configuration information includes at least one of a selected imaging mode of operation, a number of components in use, component current consumption, available input current and a cord current capacity limit.